CURRICULUM VITAE: *Chidong Zhang*

Rosenstiel School of Marine and Atmospheric Science
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EDUCATION:

1989	Ph.D.	Meteorology, The Pennsylvania State University
1985	M.S.	Meteorology, University of Utah
1982	B.S.	Meteorology, Peking University

PROFESSIONAL OCCUPATION:

2016 -	Supervisory Oceanographer	PMEL/NOAA
2004-2016	Professor	University of Miami
2000-2004	Associate Professor	University of Miami
1997-2000	Research Associate Professor	University of Miami
1992-1996	Research Assistant Professor	University of Washington
1991-1992	Postdoctoral Visitor	University of Washington
1989-1991	Research Associate	The Pennsylvania State University

AWARD AND HONOR:

2016 Editor's Citation for Excellence in Refereeing, Review of Geophysics
2014 Fellow, American Meteorological Society
2001 Graduate Student Appreciation Award, University of Miami
1999 Editor's Citation for Excellence in Refereeing, Journal of Geophysical Research-Oceans
1991 NOAA Global and Climate Change Postdoctoral Fellowship

PROFESSIONAL ASSOCIATION:

1994 - Member, American Geophysical Union
1989 - Member, American Meteorological Society

FIELD PROGRAM EXPERIENCE:

Chief Scientist, Dynamics of the Madden-Julian Oscillation (DYNAMO), October 2011 – March 2012, Indian Ocean
Guest Participant, Saharan Air Layer Experiment (SALEX), September 2006, Barbados
PI, Eastern Pacific Investigation on Climate (EPIC2001), September 2001, Huatulco, Mexico
Postdoctoral Participant, Tropical Ocean Global Atmosphere (TOGA) Couple Ocean Atmosphere Response Experiment (COARE), December 1992 - February 1993, Honiara, Solomon Islands.

PROFESSIONAL SERVICE

Co-Chair, Science Steering Committee of Years of the Maritime Continent (YMC), 2015-
Member, Organizing Committee of Workshop on Intraseasonal Processes and Prediction in the Maritime Continent, Singapore, 11-13 April 2016
Member, US Steering Committee of International Indian Ocean Expedition 2 (IIOP-2), 2015 -
Member, Tropical Pacific Observing System (TPOS) Planetary Boundary Layer Task Team, 2015 -
Member, SPURS-2 Steering Committee, 2015 -
Member, Organizing Committee of the 2nd International Workshop on Years of the Maritime

Continent, BMKG, Jakarta, November 24-26, 2015.
Member, AMS Awards Nomination Committee, 2015-2018.
Member, Editorial Advisory Board of Mathematics of Climate and Weather Forecasting, 2015 –
Member, Review Panel for NOAA Earth System Laboratory, Physical Science Division, May 12-14, 2015
Guest Editor, Journal of the Meteorological Society of Japan, 2015
Member, Organizing Committee of BIRS workshop on Stochasticity and Organization of Tropical Convection, the Banff Centre, Banff, Alberta, Canada, April 27 - May 1, 2015
Chair, Organizing Committee of the 1st International Workshop on Years of the Maritime Continent, Center for Climate Research Singapore, January 27-30, 2015.
Member, National Academy of Sciences Committee on Developing a U.S. Research Agenda to Advance Subseasonal to Seasonal Forecasting, 2014-2016.
Editor, Journal of Geophysical Research – Atmosphere, 2013 – 2017.
Co-Chair, Symposium on Prediction of the Madden-Julian Oscillation, AMS Annual Meeting, Austin, TX, January 10, 2013.
Member, Council of the American Meteorological Society, 2012 – 2015
Member, Organizing Committee of AMS Michio Yanai Symposium, January 27, 2011
Member, Organizing Committee of 2011 NCAR ASP Summer Colloquium on African Weather and Climate, July 25 – August 5, 2011
Member, ARM MJO Investigation Experiment (AMIE) Science Steering Committee, 2010 - 2013
Chair, Dynamics of the MJO (DYNAMO) Science Steering Committee, 2010 – 2013
Member, Cooperative Indian Ocean Experiment on Intraseasonal Variability in the Year 2011 (CINDY2011) International Science Steering Committee, 2010 – 2013
Member, WWRP/WCRP YOTC MJO Task Force, 2010 – 2012
Member, Review Panel of National Research Council, 2009 - 2011
Member, US CLIVAR MJO Working Group, 2006 – 2009
Chair, Organizing Committee of NCAR/TIIME Summer Retreat on Tropical Convection and Weather Climate Interface, July 2006, Boulder, CO
Associate Editor, Journal of Climate, 2005 –
Member, AMS Committee on Hurricanes and Tropical Meteorology, 2004 – 2007
Member, International CLIVAR's Atlantic Implementation Panel (AIP), 2004 – 2007
Member, International Science Working Group of North American Monsoon Experiment (NAME), 2001 – 2005
Chair, Organizing Committee of MJO-ENSO workshop, 2000, Princeton, NJ
Member, AMS Max Eaton Award committee, 1997

PUBLICATIONS

Suhas, E., D. Waliser, R. Murtugudde, C. Zhang, M. Moncrieff, D. Posselt, C. Ruf, 2016: The Fidelity of Observing Surface Wind and Large-Scale Modes of Tropical Variability Based on CYGNSS, RapidScat and QuikSCAT Orbital Sampling Characteristics. J. Atmos. Ocean. Tech., submitted.

Hagos, S.M., C. Zhang, C. D. Burleyson, Z. Feng, J. Benedict, C. De Mott, M. Martini, 2016: The impact of diurnal cycle on the propagation of MJO convection across the Maritime Continent. JAMES, submitted.

Pilon, R., C. Zhang, and J. Dudhia, 2016: Roles of Deep and Shallow Convection and Microphysics in the MJO Simulated by the Model for Prediction Across Scales (MPAS). J. Geophys. Res. Atmos., submitted.

Janiga, M.A. and C. Zhang, 2016: MJO Moisture Budget during DYNAMO in a Cloud-Permitting Model. J. Atmos. Sci., 73, 2257-2278.

Liu, P., Q. Zhang, C. Zhang, Y, Zhu, M. Khairoutdinov, H.-M. Kim, C. Schumacher, M. Zhang, 2015: A Revised Real-Time Multivariate MJO Index. Mon. Wea. Rev., 144, 627-642.
Zermeno, D., C. Zhang, P. Kollias, and H. Kalesse, 2015: Shallow Cloud Moistening in MJO and non-MJO Large-Scale Convective Events over the ARM Manus Site. JAS, 72, 4797–4820.
Chandra, A., C. Zhang, H.-Y. Ma, and S.A. Klein, 2015: Low cloud statistics over Tropical Western Pacific in ARM observations and CAM5 simulations. J. Geophys. Res. Atmos., 120, doi:10.1002/ 2015JD023369.
Chandra, A., Zhang, C., Kollias, P., Matrosov, S., and Szyrmer, W., 2015: Automated rain rate estimates using the Ka-band ARM zenith radar (KAZR), Atmos. Meas. Tech., 8, 3685-3699, doi:10.5194/amt-8-3685-2015.
Ulate, M., C. Zhang, and J. Dudhia, 2015: Role of water vapor and convection-circulation decoupling in MJO simulations by a tropical channel model, J. Adv. Model. Earth Syst., 07, doi:10.1002/2014MS000393.
Ulate, M., J. Dudhia, and C. Zhang, 2014: Sensitivity of the water cycle over the Indian Ocean and Maritime Continent to parameterized physics in a regional model, J. Adv. Model. Earth Syst., 06, doi:10.1002/2014MS000313.
Deng, M., P. Kollias, Z. Feng, C. Zhang, C. Long, H. Kalesse, A. Chandra, V. V. Kumar, P.A. Protat, 2014: Stratiform and Convective Precipitation Observed by Multi-Wavelength Radars during the DYNAMO/AMIE Experiment. *J. Appl. Meteor. Climatol.*, **53**, 2503–2523.
Kim, D., P. Xavier, E. Maloney, M. Wheeler, D. Waliser, K. Sperber, H. Hendon, C. Zhang, R. Neale, Y.-T. Hwang, H. Liu, 2014: Process-oriented MJO Simulation Diagnostic: Moisture Sensitivity of Simulated Convection. J. Clim., 27, 5379-5395.
Ling, J., P. Bauer, P. Bechtold, A. Beljaars, R. Forbes, F. Vitart, M. Ulate, C. Zhang, 2014: Global vs. Local MJO Forecast Skill of the ECMWF model during DYNAMO. Mon. Wea. Rev., 142, 2228-2247.
Gottschalck, J., P.E. Roundy, C.J. Schreck III, A. Vintzileos, and C, Zhang, 2013: Large-Scale Atmospheric and Oceanic Conditions During the 2011-12 DYNAMO Field Campaign. Mon. Wea. Rev., 141, 4173-4196.
Yoneyama, K., C. Zhang, and C.N. Long, 2013: Tracking pulses of the Madden-Julian Oscillation. Bull. Amer. Met. Soc., 94, 1871-1891.
Zhang, C., 2013: Madden-Julian Oscillation: Bridging Weather and Climate. Bull. Amer. Met. Soc., 94, 1849–1870.
Zermeno, D., and C. Zhang, 2013: Possible Root Causes of the Surface Westerly Biases over the Equatorial Atlantic in Global Climate Models. J. Climate, 26, 8154-8168
Ling, J., C. Zhang, and P. Bechtold, 2013: Large-Scale Distinctions Between MJO and non-MJO Convective Initiation over the Tropical Indian Ocean. J. Atmos. Sci., 70, 2696-2712.
Zhang, C., J. Gottschalck, E.D. Maloney, M.W. Moncrieff, F.Vitart, D.E. Waliser, B. Wang, M.C. Wheeler, 2013: Cracking the MJO Nut. Geophys. Res. Lttr., 40, 1223–1230. DOI: 10.1002/grl.50244.
Ling, J., and C. Zhang, 2013: Diabatic heating profiles in recent global reanalyses. J. Clim., 26, 3307-3325.
Chattopadhyay, R., A. Vintzileos, and Chidong Zhang, 2013: A Description of the Madden Julian Oscillation Based on Self Organizing Map. J. Climate, 26, 1716-1732.
Kapur, A. and C. Zhang, 2012: Multiplicative MJO Forcing of ENSO. J. Clim., 25, 8132–8147
Adams, A.M., J.M. Prospero, and C. Zhang, 2012: CALIPSO Derived Three-Dimensional Structure of Aerosol over Atlantic Basin and Adjacent Continents. J. Clim., 25, 6862-6879.
Reid, J. S., Xian, P., Hyer, E. J., Flatau, M. K., Ramirez, E. M., Turk, F. J., Sampson, C. R., Zhang, C., Fukada, E. M., and Maloney, E. D., 2012: Multi-scale meteorological conceptual analysis of observed active fire hotspot activity and smoke optical depth in the Maritime Continent, Atmos. Chem. Phys., 12, 2117-2147, doi:10.5194/acp-12-2117-2012.

Tao, W.-K., J.-P. Chen, Z.-Q. Li, C. Wang, and C. Zhang, 2012: Impact of Aerosols on Convective Clouds and Precipitation. Geophy. Rev., 50, DOI 8755-1209/12/2011RG000369

Zhang, C., and J. Ling, 2012: Potential vorticity of the Madden-Julian Oscillation. J. Atmos. Sci., 69, 65-78.

Nguyen, H., C.D. Thorncroft, and C. Zhang, 2011: Guinean coastal rainfall of the West African Monsoon. Quart. J. Roy. Met. Soc., 137, 1828-1840.

Kapur, A. C. Zhang, J. Zavala-Garay, H. H. Hendon, 2011: Role of stochastic forcing in ENSO in observations and a coupled GCM. Clim. Dyn., DOI 10.1007/s00382-011-1070-9

Thorncroft, C.D., H. Nguyen, C. Zhang, and P. Peyrillé, 2011: Annual Cycle of the West African Monsoon - Regional Circulations and Associated Water Vapor Transport. Quart. J. Roy. Met. Soc., 137, 129–147.

Ling, J., and C. Zhang, 2011: Structural evolution in heating profiles of the MJO in global reanalyses and TRMM retrievals. J. Clim., 24, 825-842.

Nolan, D.S., S.W. Powell, C. Zhang, and B.E. Mapes, 2010: Idealized Simulations of the Intertropical Convergence Zone and its Multi-level, Cross-Equatorial Flows. J. Atm. Sci., **67**, 4028–4053.

Ray, P., C. Zhang, M.W. Moncrieff, J. Dudhia, J.M. Caron, L.R. Leung, and C. Bruyere, 2010: Role of the atmospheric mean state on the initiation of the Madden-Julian Oscillation in a tropical channel model. Clim. Dyn., 35, DOI 10.1007/s00382-010-0859-2.

Zhang, C., J. Ling, S.M. Hagos, W.-K. Tao, S. Lang, Y.N. Takayabu, S. Shige, M. Katsumata, W.S. Olson, and T. L'Ecuyer, 2010: MJO Signals in Latent Heating: Results from TRMM Retrievals. J. Atmos. Sci., 67, 3488–3508.

Huang, J., C. Zhang, and J. Prospero, 2010: African Dust Outbreaks: A satellite perspective of temporal and spatial variability over the Tropical Atlantic Ocean. J. Geophys. Res., 115, D05202, doi:10.1029/2009JD012516.

Hagos, S., C. Zhang, 2010: Diabatic Heating, Divergent Circulation and Moisture Transport in The African Monsoon System. Quart. J. Roy. Met. Soc., 136(s1), 411-425.

Ray, P., and C. Zhang, 2010: A Case Study on the Mechanisms of Extratropical Influence on the Madden-Julian Oscillation. J. Atm. Sci., 67, 515-528.

Hagos, S., C. Zhang, W.-K. Tao, S. Lang, Y. N. Takayabu, S. Shige, M. Katsumata, W. Olson, and T. L'Ecuyer, 2010: Estimates of Tropical Latent Heating Profiles: Commonalities and Uncertainties. J. Climate, 23, 542-558.

Huang, H., A. Adams, C. Wang, C. Zhang, 2009: Aerosol and West African Monsoon Precipitation: Observations and Simulations. Annales Geophysicae, 27, 4171-4181.

Zhang, C., and S. Hagos, 2009: Bi-Modal Structure and Variability of Large-Scale Diabatic Heating in the Tropics. J. Atmos. Sci., 66, 3621–3640.

Huang, J., C. Zhang, and J. Prospero, 2009: Aerosol-Induced Large-Scale Variability in Precipitation over the Tropical Atlantic. J. Clim, 22, 4970-4988.

US CLIVAR Madden-Julian Oscillation Working Group (D. Waliser, K. Sperber, H. Hendon, D. Kim, E. Maloney, M. Wheeler, K.Weickmann, C. Zhang, L. Donner, J. Gottschalck, W. Higgins, I. Kang, D. Legler, M.Moncrieff, S. Schubert, W. Stern, F. Vitart, B. Wang, W. Wang, S. Woolnough), 2009: MJO Simulation Diagnostics, *J. Clim.*, 22, 3006-3030.

Huang, J., Zhang, C., Prospero, J.M. (2009), African aerosol and large-scale precipitation variability over West Africa, *Environ. Res. Lett.* **4** 015006, doi: 10.1088/1748-9326/4/1/015006

Huang, J., C. Zhang, and J. Prospero, 2009: Large-Scale Effect of Aerosol on Precipitation in the West African Monsoon Region. *Quart. J. Roy. Met. Soc*., 135, 581-594.

Ray, P., C. Zhang, J. Dudhia, S.S. Chen, 2009: A Numerical Case Study on the Initiation of the Madden-Julian Oscillation. J. Atm. Sci., 66, 310-331.

Li, C., X. Jia, J. Ling, W. Zhou, and C. Zhang, 2009: Sensitivity of MJO simulations to convective heating profiles. Clim. Dyn., 32, 167-187.

Gu. G. and C. Zhang, 2008: A Space-Time Wavelet Spectrum Analysis and Its Application to Tropical Atmospheric Waves/Oscillations. *Current Development in Theory and Applications of Wavelets*, 2, 125-136.

Zavala-Garay J., C. Zhang, A. M. Moore, A. Wittenberg, M. Harrison, A. Rosati, A.T. Weaver, and J. Vialard, 2008: Sensitivity of hybrid ENSO models to uncoupled atmospheric variability. J. Climate, 21, 3704-3721.

Zhang, C., D.S. Nolan, C.D. Thorncroft, and H. Nguyen, 2008: Shallow meridional circulations in the tropical atmosphere. J. Climate, 21, 3453–3470.

Nolan, S.D., C. Zhang, and S.-H.Chen, 2007: Dynamics of the Shallow Circulation Around ITCZ Regions. J. Atm. Sci., 64, 2262-2285.

Mestas-Nunez, A. M., D.B. Enfield, C. Zhang, 2007: Water Vapor Fluxes over the Intra-Americas Sea: Seasonal and Interannual Variability and Associations with Rainfall. J. Clim., 20, 1910–1922.

Hendon, H.H., M. Wheeler, and C. Zhang, 2007: Seasonal dependence of the MJO-ENSO Relationship, J. Climate, 20, 531–543.

Zhang, C., P. Woodworth, and G. Gu, 2006: The seasonal cycle in the lower troposphere over West Africa from sounding observations. Q. J. Roy. Meteorol. Soc., 132, 2561-2584.

Vera, C., W. Higgins, J. Amador, T. Ambrizzi, R. Garreaud, D. Gochis, D. Gutzler, D. Lettenmaier, J. Marengo, C. R. Mechoso, J. Nogues-Paegle, P. L. Silva Dias, and C. Zhang, 2006: A Unified View of the American Monsoon Systems, J. Clim. 19, 4977-5000.

Zhang, C, M. Dong, S. Gualdi, H. H. Hendon, E. D. Maloney, A. Marshall, K. R. Sperber, and W. Wang, 2006: Simulations of the Madden-Julian Oscillation in Four Pairs of Coupled and Uncoupled Global Models. Climate Dynamics, 27, 573-592. DOI: 10.1007/s00382-006-0148-2.

Higgins, W., D. Ahijevych, J. Amador, A. Barros, E. H. Berbery, E. Caetano, R. Carbone, P. Ciesielski, R. Cifelli, M. Cortez-Vazquez, A. Douglas, M. Douglas, G. Emmanuel, C. Fairall, D. Gochis, D. Gutzler, T. Jackson, R. Johnson, C. King, T. Lang, M.-I. Lee, D. Lettenmaier, R. Lobato, V. Magaña, J. Meiten, K. Mo, S. Nesbitt, F. Ocampo-Torres, E. Pytlak, P. Rogers, S. Rutledge, J. Schemm, S. Schubert, A. White, C. Williams, A. Wood, R. Zamora, and C. Zhang, 2006: The North American Monsoon Experiment (NAME) 2004 field campaign and modeling study. Bull. Amer. Met Soc., 87, 79-94.

Mestas-Nuñez, A. M., C. Zhang, D.B. Enfield, 2005: Uncertainties in Estimating Moisture Fluxes over the Intra-Americas Sea. J. Hydromet, 6, 696–709.

Zhang, C. 2005: Madden-Julian Oscillation. Rev. of Geophysics, 43, RG2003, doi:10.1029/2004RG000158, 2005

Zavala-Gary, J., C. Zhang, A.M. Mooer, and R. Kleeman, 2005: On the linear response of ENSO to the Madden-Julian Oscillation. J. Climate, 18(13) 2441-2459.

Zhang, C., and J. Pennington, 2004: African dry-air outbreaks. JGR, 109, D20108, doi:10.1029/2003JD003978.

McGauley, M., C. Zhang, and N.A. Bond, 2004: Large-scale characteristics of the atmospheric boundary layer in the equatorial eastern Pacific cold tongue/ITCZ region. J. Climate, 17, 3907-3920.

Zhang, C., and M. Dong, 2004: Seasonality of the Madden-Julian Oscillation. J. Climate, 17, 3169-3180.

Yano, J.-I., R. Blender, C. Zhang, and K. Fraedrich, 2004: 1/f-Noise and pulse-like events in the tropical atmospheric surface variabilities. *Q. J. Roy. Met. Soc.*, 130, 1697-1721.

Zhang, C. M. McGauley, and N.A. Bond, 2004: Shallow meridional circulation in the tropical eastern Pacific. J. Climate, 17, 133-139.

Zhang, C., and S.P. Anderson, 2003: Sensitivity of intraseasonal perturbations in SST to the structure of the MJO. J. Atmos. Sci., 60, 2196-2207.

Zhang, C., B.E. Mapes, and B.J. Soden, 2003: Bimodaility in tropical water vapor. *Q. J. Roy. Met. Soc.*, 129, 2847-2866.
Gu, G. and C. Zhang, 2002: Cloud components of the ITCZ. *J. Geophy. Res.*, 107(D21), 4565, doi:10.1029/2002JD002089.
Zhang, C., and J. Gottschalck, 2002: SST anomalies of ENSO and the Madden-Julian Oscillation in the equatorial Pacific. J. Climate, 15, 2429-2445.
Gu. G., and C. Zhang, 2002: Westward-propagating synoptic-scale disturbances and the ITCZ. J. Atmos. Sci., 59, 1062-1075.
Gu. G., and C. Zhang, 2001: A spectral analysis of westward-propagating synoptic-scale disturbances in the ITCZ. J. Climate, 14, 2725-2739.
Zhang, C., 2001: Intraseasonal perturbations in sea surface temperatures of the equatorial eastern Pacific and their association with the Madden-Julian Oscillation. J. Climate, 14, 1309-1322.
Zhang, C., H.H. Hendon, W.S. Kessler, and A. Rosati, 2001: A workshop on the MJO and ENSO. Bull. Ameri. Metero. Soc., 82, 971-976.
Zhang, C., 2001: Double ITCZs. J. Geophy. Res., 106, 11,785-11,792.
Zhang, C., and M. J. McPhaden, 2000: Intraseasonal surface cooling in the equatorial western Pacific. J. Climate, 13, 2261-2276.
Krishnan, R., C. Zhang, and M. Sugi, 2000: Dynamics of breaks in the Indian summer monsoon. J. Atmos. Sci., 57, 1354-1372.
Zhang, C., and M.-D. Chou, 1999: Variability of water vapor, infrared radiative cooling, and atmospheric instability for deep convection in the equatorial western Pacific. J. Atmos. Sci., 56, 711-723.
Hendon, H. H., C. Zhang, and J. Glick, 1999: Interannual variation of the Madden-Julian oscillation during austral summer. J. Climate, 12, 2538-2550.
Zhang, C. and H.H. Hendon, 1997: Propagating and stationary components of the intraseasonal oscillation in tropical convection. J. Atmos. Sci., 54, 753-767.
Brown, R. G., and C. Zhang, 1997: Variability of midtropospheric humidity and its effect on cloud-top height distribution during TOGA COARE. J. Atmos. Sci., 54, 2760-2774.
Zhang, C., 1997: Intraseasonal variability of the upper-ocean temperature structure observed at 0 and 165E. J. Climate, 10, 3077-3092.
Zhang, C., 1996: Atmospheric intraseasonal variability at the surface in the western Pacific Ocean. J. Atmos. Sci., 53, 739-785.
Zhang, C., 1993: Large-scale variability of atmospheric deep convection in relation to sea surface temperature in the tropics. J. Climate, 6, 1898-1913.
Zhang, C., 1993: On the annual cycle in highest clouds in the tropics. J. Climate, 6, 1987-1990.
Zhang, C., 1993: Laterally forced equatorial perturbations in a linear model. Part II: Mobile forcing. J. Atmos. Sci., 49, 585-607.
Zhang, C. and P.J. Webster, 1992: Laterally forced equatorial perturbations in a linear model. Part I: Stationary transient forcing. J. Atmos. Sci.,49, 585-607.
Zhang, C. and P.J. Webster, 1989: Effects of zonal flows on equatorially trapped waves. J. Atmos. Sci.,46, 3632-3652.
Paegle, J., C. Zhang, and D.P. Baumhefner, 1987: Atmospheric response to tropical thermal forcing in real data integrations. Mon. Wea. Rev.,115, 2976-2995.
Buchman, J., L.E. Buja, J. Paegle, C. Zhang, and D.P. Baumhefner, 1986: FGGE forecast experiments for Amazon Basin rainfall. Mon. Wea. Rev.,114, 1625-1641.

BOOK CHAPTERS

Zhang, C., 2014: Global Impacts of the Madden–Julian Oscillation. *Encyclopedia of Atmospheric Science, 2nd Edition*.
Zhang, C., 2014: MJO and Extreme Weather/Climate Events, in *Dynamics and Predictability of Global and Regional High-Impact Weather and Climate Events*. J. Li, R. Swinbank, H.

Volkert, and R. Grotjahn, Eds, Cambridge University Press

Zhang, C., 2014: MJO Initiation, in *The Global Monsoon Systems, 3rd Edition*. C.P. Chang, R. H. Johnson, Gabriel Lau, Bin Wang, Peter Webster, and Matthew Wheeler, Eds.

Tao, W.-K., Y. N.Takayabu, S. Lang, W. Olson, S. Shige, A.Hou, X. Jiang, W. Lau, T. Krishnamurti, D. Waliser, C. Zhang, R. Johnson, R. Houze, P. Ciesielski, M. Grecu, S. Hagos, R. Kakar, N. Nakamura, S. Braun, R. Oki, and A. Bhardwaj, 2013: TRMM Latent Heating Retrieval and Comparison with Field Campaigns and Large-Scale Analyses, *AMS Meteorological Monographs - Multi-scale Convection-Coupled Systems in the Tropics.*

Maloney, E.D., C. Zhang, 2013: Dr. Yanai's Contributions to the Discovery and Science of the MJO. *AMS Meteorological Monographs - Multi-scale Convection-Coupled Systems in the Tropics.*

Ray, P., C. Zhang, J. Dudhia, T. Li, and M. W. Moncrieff, 2012: Tropical channel model, in *Climate Models*, L. M. Druyan (Ed.). Tech Open Access Publisher, ISBN: 978-953-308-181-6, pp 350.

Zhang, C., 2011: Vertical structure from recent observations, in *Intraseasonal Variability of the Atmosphere-Ocean Climate System* (2nd Edition), W.K.M. Lau and D. E. Waliser, Eds, Praxis Publishing, Chichester, pp 646. ISBN: 978-3642139130

Zhang, C., 2007: Intraseasonal Oscillation, in *Tropical Meteorology*, edited by Yuqing Wang, Volume 15, in Encyclopedia of Life Support Systems (EOLSS), Developed under the Auspices of the UNESCO, Eolss Publishers, Paris, France, [http://www.eolss.net]

INVITED TALKS

"The Indo-Pacific Maritime Continent and Its Role in Global Weather-Climate", Pusan National University Symposium on Climate Challenges, Busan, Korea, July 29, 2018

"Intraseasonal Oscillation and Its Impacts II: Impact on Monsoons and Extreme Events", APEC Climate Center Subseasonal-to-Seasonal (S2S) Prediction Training Program, Busan, Korea, July 28, 2016

"Intraseasonal Oscillation and Its Impacts I: Characteristics of ISO, mechanism, and understanding its predictability", APEC Climate Center Subseasonal-to-Seasonal (S2S) Prediction Training Program, Busan, Korea, July 27, 2016

"Indo-Pacific Maritime Continent: The Crux of Global Weather-Climate", The Environmental Fluid Dynamics Laboratory, University of Notre Dame, South Bend, IN, April 5, 2016

"Role of the Indo-Pacific Maritime Continent (Malay Archipelago) in the Earth System", School of Atmospheric Sciences, Sun Yat-Sen University, Guangzhou, March 10, 2016.

"Madden-Julian Oscillation: Problems, Challenges, and Progress", AMS Annual Meeting, New Orleans, LA, January 11, 2016.

"MJO Impact on Global Weather and Climate", National Hurricane Center, Miami, FL, April 8, 2014.

"CINDY/DYNAMO/AMIE/LASP Field Campaign: A Biennial Report", AMS 31st Conference on Hurricanes and Tropical Meteorology, San Diego, CA, 31 March-4 April 2014,

"Moisture Processes in the Madden-Julian Oscillation", AGU Annual Meeting, Session of Grand challenges in moist process feedback in the climate system, San Francisco, CA, December 11 – 15, 2013.

"The CINDY-DYNAMO Field Campaign 2011-12", IWM-V, Macao, China, October 28 – 31, 2013

"Convective initiation of the MJO", Atmosphere and Cryosphere Assembly 2013, 8-12 July 2013, Davos, Switzerland

"Out of the Indian Ocean: Initiation and Global Impact of the Madden-Julian Oscillation", ECMWF, June, 2013

"Global Impact of the MJO on Weather and Climate", National Taiwan University, 17 May 2013

"Tropospheric Moisture: The Crux of the MJO?", ICGPSRO2013, Taipei, Taiwan, 14-16 May

2013

"MJO Initiation: Large-Scale Diagnostics, Field Observations, and Numerical Modeling", Academia Sinica, Taipei, Taiwan, 13 May 2013.

"The 2011-12 CINDY/DYNAMO Indian Ocean Field Campaign", EGU, April 8-12, 2013

"Madden-Julian Oscillation: Its Potential Vorticity vs. Gill-Model Interpretations", EGU, April 8-12, 2013

"Processes of MJO initiation over the Indian Ocean", CAWCR Annual Workshop, Melbourne, 12-15 November, 2012.

"Preliminary thoughts from the CINDY/DYNAMO field campaign", AOGS-AGU (WPGM) Joint Assembly, Singapore, 13-17 August, 2012

"MJO and Weather/Climate Extremes", ICDM 2012 Workshop on "Dynamics and Predictability of High-impact Weather and Climate Events", Kuming, China, 6 - 9 August 2012.

"DYNAMO Field Campaign", 2012 NCAR ASP Summer Colloquium "The Weather-Climate Intersection: Advances And Challenges", June 4-22, 2012, Boulder

"DYNAMO Field Campaign", 11th Annual AMS Student Conference, New Orleans, LA January 21-22, 2012

"A strategy of isolating climatic effects of aerosol on precipitation from other weather and climate factors", IUGG 2011 General Assembly, Melbourne, Australia, 28 June - 7 July 2011.

"A PV View of the MJO and Equatorial Waves", IUGG 2011 General Assembly, Melbourne, Australia, 28 June - 7 July 2011

"DYNAMO", NOAA Climate Board, May 17, 2011

"PV of the MJO and Equatorial Waves", PAOC, MIT, Boston, MA, 9 May 2011

"A PV analysis for the MJO", The Waves and Multiscale Processes in the Tropics Workshop, American Institute of Mathematics, Palo Alto, CA, December 6 – 10, 2010

"Madden Julian Oscillation and other tropical variability", Workshop on Evaluation of Reanalyses – Developing an Integrated Earth System Analysis (IESA) Capability, Baltimore, MD, November 1-3, 2010

"DYNAMO: A Research Program on MJO Initiation", the 35th Annual Climate Diagnostics and Prediction Workshop, Raleigh, NC, October 4-7, 2010

"Role of the MJO in ENSO Simulated by CGCMs", AGU Western Pacific Geophysical Meeting, Taipei, Taiwan, June 21 – 15, 2010

"Vertical Structures of Tropical Diabatic Heating: Ubiquity of the Leading Modes and its Dynamical Implications", Courant Institute of Mathematical Sciences. November 18, 2009

"Simulations of the Madden-Julian Oscillation by Global Climate Models", International Workshop on Global Change Projection: Modeling, Intercomparison, and Impact Assessment, Yokohama, Japan, February 18-20, 2009.

"Cross-scale air sea interaction", European Centre for Medium-Range Weather Forecasts Workshop on Ocean-Atmosphere Interactions measurements, Reading, England, November 10 – 12, 2008.

"Bimodal Structure in Diabatic Heating Profiles over the Tropical Pacific Region", 2008 Western Pacific Geophysics Meeting, Cairns, Australia, July 21 – August 1, 2008.

"MJO and ENSO: A Stochastic Connection between Weather and Climate", Department of Atmospheric and Geophysical Sciences, State University of New York at Albany, February 24, 2008.

"Research Issues on Tropical Convection and Two-way Interaction with the Large-scale Flow", AMS Forum: Climate Change, 17 January 2007

"The MJO-ENSO Problem", Department of Earth and Atmospheric Sciences, Cornell University, 29 September 2006

"The MJO-ENSO Problem", Workshop on the Organization and Maintenance of Tropical Convection and the Madden Julian Oscillation, Trieste, March 13-17, 2006

"Shallow meridional circulation in the tropics", Center for Geophysical Research, University of Costa Rica, San José, 25 May 2005

"The structure and annual cycle of the MJO", ECMWF/CLIVAR Workshop on Simulation and Prediction of Intra-Seasonal Variability with Emphasis on the MJO, ECMWF, 3 - 6 November 2003.

"Role of Radiation in the Large-Scale Circulation in the Western Pacific", ARM annual meeting, Boulder, April 2003

"Observed evidence for a dynamic connection between the MJO and ENSO", European Geophysical Society XXVII General Assembly, Nice, April 2002

"MJO Theories", NCAR Summer Colloquium, Boulder, 17 July, 2001.

"Tropical Coupled Variability", NCAR Summer Colloquium, Boulder, 13 July, 2001.

"The MJO-ENSO Problem", Climate Diagnoses Center, NOAA, Boulder, 25 June, 2001.

"Scrutinizing ITCZ Theories", Program of Atmospheric and Oceanic Science, University of Colorado, Boulder, 22 June, 2001.

"The bimodality of tropical upper-tropospheric water vapor: Observations from in situ and remote sensing measurements", NASA Goddard Space Flight Center, Grenbelft, 10 May, 2000

"The Intraseasonal Oscillation in the Atmosphere and the Ocean of the Western Pacific Warm Pool", College of the Oceanic and Atmospheric Sciences, Corvales, Oregon State University, OR, 8 March 1996

"Coherence between SST and Atmospheric Variability in the Western Pacific Warm Pool", the 8th Conference on Air-Sea Interaction, AMS, Atlanta, GA, 28 Januray - 2 February, 1996.

"Atmospheric Intraseasonal Variability at the Surface in the Western Pacific Ocean", NASA Goddard Space Flight Center, Greenbelt, MD, 18 January 1995.

TEACHING

Graduate courses: General Circulation of the Atmosphere, Introduction to Atmospheric Sciences, Climate Dynamics, Tropical Atmosphere and Ocean

Undergraduate courses: Introduction to Meteorology, Atmospheric Dynamics II, Advanced Weather Forecast and Analysis, Current Weather and Climate Topics, Physical Meteorology, Global Climate Change

GRADUATE STUDENTS ADVISED

Jeremy Pennington (MS), Guojun Gu (PhD), Michael McGauley (MS), Phoebe Woodworth (MS), Pallav Ray (PhD), Atul Kapur (PhD), Marcela Ulate (PhD), David Zermeno (PhD).

POSTDOCTORAL ASSOCIATES ADVISED

Randy Brown, Roberto Mestas-Nunez, Javier Zavala-Gary, Jingfeng Huang, Rajib Chattopadhyay, Samson Hagos, Jian Ling, Matthew Janiga, Arun Arunchandra, Romain Pilon

REFEREE

National Science Foundation, European Commission, National Oceanic and Atmospheric Administration, National Aeronautics and Space Administration, Department of Energy, National Research Council, Journal of the Atmospheric Sciences, Journal of Climate, Monthly Weather Review, Bulletin of the American Meteorological Society, Journal of Applied Meteorology, Journal of Physical Oceanography, Journal of Atmospheric and Oceanic Technology, Journal of Geophysical Research-Atmosphere, Journal of Geophysical Research-Ocean, Journal of Advances in Modeling Earth Systems, Geophysical Research Letters, International Journal of Climatology, Quarterly Journal of the Royal Meteorological Society, Geosciences Education Journal, Nature